neck. This species was obtained from the districts near Popayan. The second species, for which I propose the name of *phaïnolæma*, has several characters in common with *H. auritus* and *H. auriculatus*; it differs, however, from both those species in the beautiful metallic-green colouring extending over the throat and front, as well as the sides of the throat. The two species may be described as follows:—

HELIOTHRIX PURPUREICEPS.

Male: Forehead, crown and nape beautiful purplish-blue; upper surface, upper tail-coverts, and upper and under wing-coverts beautiful golden-green; mark below the eye and ear-coverts black, terminating in a small blue tuft; below the black a streak of rich luminous green; wings purplish-black; central tail-feathers bluish-black; lateral tail-feathers, chin, throat, and under surface, pure white; bill black; feet flesh-colour.

Total length, $4\frac{1}{8}$ inches; bill, $\frac{5}{8}$; wing, $2\frac{1}{2}$; tail, $1\frac{3}{4}$.

Hab. Popayan.

HELIOTHRIX PHAÏNOLÆMA.

Male: Head, upper surface, upper tail-coverts, upper and under wing-coverts rich golden-green, very brilliant on the head; wings purplish-black; four central tail-feathers bluish-black; lateral tail-feathers snowy-white; below and behind the eye a lengthened mark of black, terminating in a violet-blue tuft; chin, throat and sides of the neck rich luminous green; breast and under surface pure white; bill black; feet flesh-colour.

Total length, $4\frac{1}{2}$ inches; bill, 1; wing, $2\frac{3}{8}$; tail, $1\frac{1}{8}$.

Hab. River Napo.

BOTANICAL SOCIETY OF EDINBURGH.

March 1856.—Dr. Greville, Secretary, in the Chair.

The following papers were read:—

1. "Notes on the Flora of Perth," by Dr. W. Lauder Lindsay.

"The most interesting plants of the district are probably *Scheuchzeria palustris, Moneses grandiflora, Teucrium Chamædrys,* and *Turritis glabra*; but the following also are noteworthy: *Corallorhiza innata, Epipactis latifolia, Cephalanthera grandiflora* and *C. ensifolia, Neottia Nidus-Avis, Paris quadrifolia, Erigeron alpinus, Trientalis europæa, Adoxa moschatellina, Leonurus Cardiaca, Scrophularia vernalis.*"

2. "On the occurrence of *Cladophora repens* (J. Agardh) at Malahide, Co. Dublin," by A. C. Maingay.

From the specimen now shown, it appears that Mr. W. M'Calla found this plant in Ireland in 1841, and therefore that to him is due the credit of having first collected it in this country, although he

was ignorant at the time of its being a new species, and in consequence communicated it to Professor Balfour under the name of *Conferva Brownii*.

Dr. Harvey's slight doubt as to the British form of *Cladophora repens* being the same species with that described by J. Agardh is entirely dispelled by these specimens from Ireland, in which the articulations, although variable, are in general shorter than in the Jersey specimens gathered by Miss Turner, and intermediate in size between Agardh's plant and that described by Harvey.

3. "On the British species of *Arctium*," by Charles C. Babington, M.A., F.R.S. &c. (See p. 369.)

4. "Register of the Flowering of certain Plants in the Royal Botanic Garden, from 14th Feb. till 13th March 1856, as compared with the five previous years," by Mr. M'Nab.

MISCELLANEOUS.

On the Influence of the Soil on the Distribution of Plants. By M. Stur. Communicated by Count Marschall.

In a Memoir presented to the Imperial Academy of Sciences of Vienna, March 6, 1856, M. Stur, treating of the influence of the soil on the distribution of plants, gave the results of the observations made by himself in the Alpine region of Austria.

The soil on which plants live is either rocky or disintegrated. The "rocky" or solid soil is either of calcareous or of argillaceous and siliceous nature. The "disintegrated" or detrital soil is composed of fragments from the "rocky," agglutinated by mineral substances of tertiary origin; it contains therefore lime, silica, and alumina, in more or less equal portions.

The rocky soil prevails in the higher elevations of the Alpine region; the detrital soil fills up the bottoms of the valleys and depressions. The first corresponds to the continents surrounding the tertiary sea, or to the islands emerging from it; the second indicates the extension of this sea itself, as formed by drift deposited on its bottom.

The nature of the roots is an essential condition for the thriving of any plant on either of these soils. Species with annual fleshy, or with compound fasciculated, roots, or with underground stems, can only live on detrital soil; those with woody roots, with numerous ramifications, are best fitted for the rocky soil.

A comparison of the flora of the higher calcareous region with the mica-schist flora proves the plants of either of them, although equal in size, to differ so materially from each other in shape, that it must be admitted that the geological constitution of the soil has an influence on the vegetation covering its surface.

Alpine plants carried down by the streams into the plain increase in size and grow more luxuriantly in their new station. Forest-trees